

# Federal Occupational Health Opening

- The program has been developed by Federal Occupational Health to prepare federal employees and their families for the impact of a possible influenza pandemic.

# Federal Occupational Health Presentation Objectives

- To provide background information about pandemics
- To provide basic medical information about influenza
- To raise awareness about how your agency employees will prepare and respond to a possible pandemic
- To provide a forum to ask questions and to understand individual and agency issues and concerns.
- *"Once a pandemic virus emerges, it is too late to begin planning or to begin collaboration. There will only be a 20-30 day window between emergence and pandemic."*
- Dr. Klaus Stohr, WHO Global Pandemic Project.

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## Front Page News

- Pandemic flu is front page news

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## Previous Disease Headlines

These stories were also front page news:

- Legionnaires' Disease
- The Swine Flu
- Ebola Virus
- Toxic Shock Syndrome
- SARS outbreak 1

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## Pandemic Influenza

### What is an influenza pandemic?

- Global disease outbreak
- A new influenza strain emerges
- Causes serious illness to large populations worldwide.

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## Historical Facts

- Influenza pandemics have occurred for hundreds of years
- Three pandemics in the 20<sup>th</sup> Century
  - Spanish Flu (1918): 675,000 Americans died, 40-50 million deaths worldwide
  - Asian Flu (1957): 2 million deaths worldwide
  - Hong Kong Flu (1968): 1 million deaths worldwide

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## Current Facts

- “Bird Flu” (H5N1 strain) now spreading rapidly among birds; related to “Spanish flu” virus
- Human infection has occurred primarily from direct contact with infected birds
- To date, people infected with H5N1 virus have shown a very high mortality rate.
- Most “conditions” for a pandemic have been met

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## Current Phase of Alert

### per WHO Global Influenza Preparedness Plan

- 1. Inter-pandemic Phase. Low risk of human cases.
- 2. New virus in animals, no human cases. Higher risk of human cases.
- **3. Pandemic alert. No or very limited human-to-human transmission.**
- 4. New virus causes human cases. Evidence of increased human-to-human transmission.
- 5. Evidence of significant human-to-human transmission
- 6. Pandemic. Efficient and sustained human-to-human transmission.



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## Other Facts

- There is no sustained human-to-human transmission of H5N1 influenza (*currently no pandemic*)
- H5N1 may never become a human pandemic virus
- Greater than 99% of Americans survived the 1918 flu pandemic, the deadliest influenza pandemic in recent history
  - 2.5% mortality, which far exceeds the mortality rate for typical seasonal flu, which is 0.1%
  - Characteristics of the next pandemic strain are still unknown; can't predict the mortality rate for an unknown strain

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## Pandemic Influenza Basics

- We resist the seasonal flu because seasonal flu is a variation of existing flu strains we've either gotten sick from before and/or have some immunity to because of taking flu shots. Our body's immune systems are better prepared to fight seasonal flu than pandemic flu since pandemic flu is caused by a strain of influenza virus our bodies are not familiar.
- A flu virus our immune system has never been exposed to before can cause considerably more severe symptoms than seasonal flu and therefore more deaths can result.

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## Pandemic Influenza Basics (cont.)

- When it appears that everybody on earth is sick, who comes to the rescue? Preparation will be made on a worldwide basis, but if a pandemic takes hold, most likely you'll be relying on local resources to get you through.
- We live in an "on demand" world. Goods, manufacturing, our food supply depend on a healthy worldwide population. Even a moderate influenza pandemic will likely cause disruptions in the flow of goods and services unlike anything we've ever experienced before.

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## Pandemic Influenza Basics (cont.)

- Many scientists believe it is only a matter of time until the next influenza pandemic occurs. However, the timing and severity of the next pandemic can not be accurately predicted.
- The H5N1 (avian flu) virus is considered the most imminent threat and is being monitored very closely. Although it is uncertain this virus will ever cause a human pandemic, it must be presumed that it will. For this reason, scientists are already hard at work trying to develop an effective influenza vaccine for H5N1.

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## Current Influenza Facts

- There are 6 Necessary Conditions for a Pandemic Influenza Outbreak:
  1. Widespread and spreading prevalence of a new influenza virus subtype in migratory birds; broad host range
  2. Continued outbreaks among domestic poultry
  3. Lethal mammalian infection (cats, pigs, etc.)
  4. Virus proves to be evolving
  5. Sporadic human cases occur
  6. Finally, sustained and rapid person-to-person transmission becomes evident.
- Only unmet condition necessary for H5N1 to enter human pandemic status is sustained and rapid human-to-human spread of disease.

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## WHO Alert Phase

- Transmission of avian flu from birds to humans remains very limited in spite the millions of birds that have died from it. As the H5N1 virus continues to spread to the rest of the world as an awesome avian pandemic, it will have more opportunity to come into contact with humans and pigs. If surveillance reveals increasing cases of human-to-human transmission the alert phase will go up.
- Worldwide surveillance is a key to containment strategy and WHO is the major coordinator of this surveillance. Countries with more advanced resources are cooperating to assist nations that have little or no surveillance capability, but there remain large gaps in the worldwide surveillance coverage.



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## Reassuring Influenza Facts

- There is currently **no pandemic** of H5N1 human influenza.
- Greater than 99% of Americans survived the 1918 flu pandemic, the worst and deadliest pandemic in recent history.
- For the past several years, public health authorities have been working to improve preparedness.
- There are reasonable steps the average citizen can take to decrease the effects of a pandemic.

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## WHO Recommendations

- Strengthen national preparedness
- Reduce opportunities for a pandemic virus to emerge
- Improve the early warning system
- Delay initial and international spread
- Accelerate vaccine development
- Public Health authorities in countries with adequate resources should stockpile antiviral drugs for use at the start of a pandemic



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## The U.S. Strategy – Three Pillars:

### ■ 1. Preparedness and Communication

- Should be undertaken before a pandemic
- Communicate roles and responsibilities to all levels of government, segments of society and individuals

### 2. Surveillance and Detection

- Ensure the earliest warning possible

### 3. Response and Containment

- Limit the spread of the disease
- Mitigate the health, social and economic impacts

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## Influenza Vaccine

- **The public and many health care workers have unrealistic expectations of how much a pandemic could be blunted with a vaccine.**
- The use of a vaccine against a pandemic influenza virus has a great potential – in the future,. The reality for now is that production is too slow for a vaccine to be in place before much damage is done. There is some promising activity toward having on hand an H5N1 vaccine, but the value of its use on a large scale as of now is unproven. Should H5N1 ever mutate to a form that transmits easily from human-to-human, the longer the scientific community has before that happens the better our chances of being prepared with a practical vaccine.
- Bottom line on pandemic vaccine vs. a possible pandemic – don't count on a vaccine appearing to make a dramatic rescue. Although seasonal vaccine doesn't protect against pandemic strains, it is still wise to take the seasonal vaccine.

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## Drugs to treat influenza - antivirals

- The public and many health care workers have unrealistic expectations of how much a pandemic could be blunted by use of antiviral medication.
- The plain truth is that very limited supplies of antivirals are available. How effective they will be is unknown.
- Due to limited supplies, a plan for how the available supply will be used will have to be followed.
- Because of the potential for misuse, public health agencies are advising against stockpiling antivirals. If antivirals end up being a silver bullet during a pandemic, there may be just one shot at their most effective application.

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## What you can do

- Everyone can take practical steps to prepare. Lets take a look at actions that can make a difference at work and at home.

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## What you can do

### Agency and Individual Planning

- Be an active advocate of your employer's pandemic plan
- Establish an ethic of infection control at the workplace and at home
- Start a pandemic plan for you and your family

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## Protecting you and your family

- *"Individual action is perhaps the most important element of pandemic preparedness and response"*

HHS Pandemic Influenza Response Plan

- Be informed and proactive
- Cover coughs and sneezes with a handkerchief or tissue, or use a sleeve if you don't have a tissue
- Wash hands frequently. Use antiseptic hand wash solution if water is unavailable
- Keep your hands away from your face to prevent the spread of germs from hands to vulnerable eyes, nose, and mouth

# Federal Occupational Health Protecting.... Cont.

- Many of the preparedness items for a pandemic apply to other possible emergency situations. Make pandemic preparedness part of an overall strategy to weather whatever might come your way.
- Note that some aspects of planning are unique to a pandemic, especially the reduced likelihood of assistance from outside your community and the potential for widespread economic and social disruptions.

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## Protecting you and your family

- Children can spread flu very easily; teach hygiene practices and reinforce regularly
- Avoid people who are sick unless you are essential to their care
- Stay home if you are sick
- Ask a health care provider about a pneumonia shot
- Get your seasonal flu shots
- Practice an overall healthy lifestyle



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## Protecting you and your family

- Be prepared for possible public activity restrictions
- “Social Distancing” infection control techniques may bring about changes to typical behaviors such as shaking hands or using public transportation
- Consider how economic disruptions might affect you and your ability to purchase necessities
- Beware of anyone trying to sell products for protection that are not endorsed by public health officials
- Watch for additional guidance for use of personal protective equipment such as face masks

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## Protecting you and your family

- Store a supply of water and food
- Have nonprescription drugs and other health supplies on hand, including pain relievers, stomach remedies, cough and cold medicines, fluids with electrolytes, and vitamins
- Ask loved ones how they will be cared for if they get sick and what medications will be needed for their care
- Volunteer with local groups to prepare and assist with emergency response
- Get involved in your community as it works to prepare for an influenza pandemic

# Federal Occupational Health Protecting.... Cont.

- Ask a health care provider about a pneumonia shot – if over 65 or at high risk due to a chronic condition, disease or other factors.
- Get your seasonal flu shots. It may help to prevent emergence of new flu strains.
- Practice an overall healthy lifestyle. Smoking, lack of exercise, and poor control of existing lung problems may increase your risk of serious flu complications.

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## HHS Pandemic flu web site

- HHS has committed to making this site useful to a wide range of viewers. From individuals to large corporations there is a wealth of information. In fact, there is so much it takes some exploring to get a feel for the full range of information available. If you don't see what you are looking for right away, take some time to look around. Especially helpful is that updated material on the avian flu situation is posted quickly and frequently.
- FOH has also committed to keeping a useful pandemic section on our website focused on the needs of the federal sector: <http://www.foh.dhhs.gov/> Check out our frequently asked questions. Of course, there is a link to the HHS pandemic flu site.

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## How FOH will help (cont.)

- Provide vaccinations and distribute antivirals (if available) according to CDC and HHS recommendation.
- FOH On-Line Information Center & Pandemic Influenza Website  
<http://www.foh.dhhs.gov>

# Federal Occupational Health Closing

- Preparedness at a local level can't be overemphasized. Don't expect somebody from outside your community to rush to your rescue. Likely they will be busy in their own communities.
- Everyone can have a meaningful role in pandemic prevention, even if it is "just" paying more attention to hand washing and covering coughs and sneezes.
- H5N1 may never become a human pandemic, but planning as if it will helps us to be ready for when the next flu pandemic arrives.

# Federal Occupational Health Closing (cont.)

- Don't expect vaccines and antiviral medications to provide some miraculous feat in stopping pandemic in its tracks. If we're lucky, they'll be there to help us, but we have to plan as if they won't.
- Pandemic preparedness and planning is a moving target. Stay informed.